

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P590907

Luminaire Tested: FSR-24-2-LD4-4STD-35-UNV-80-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590907
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4STD-35-UNV-80-96-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7736.0 lumens
Efficiency: N/A
Efficacy: 116.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

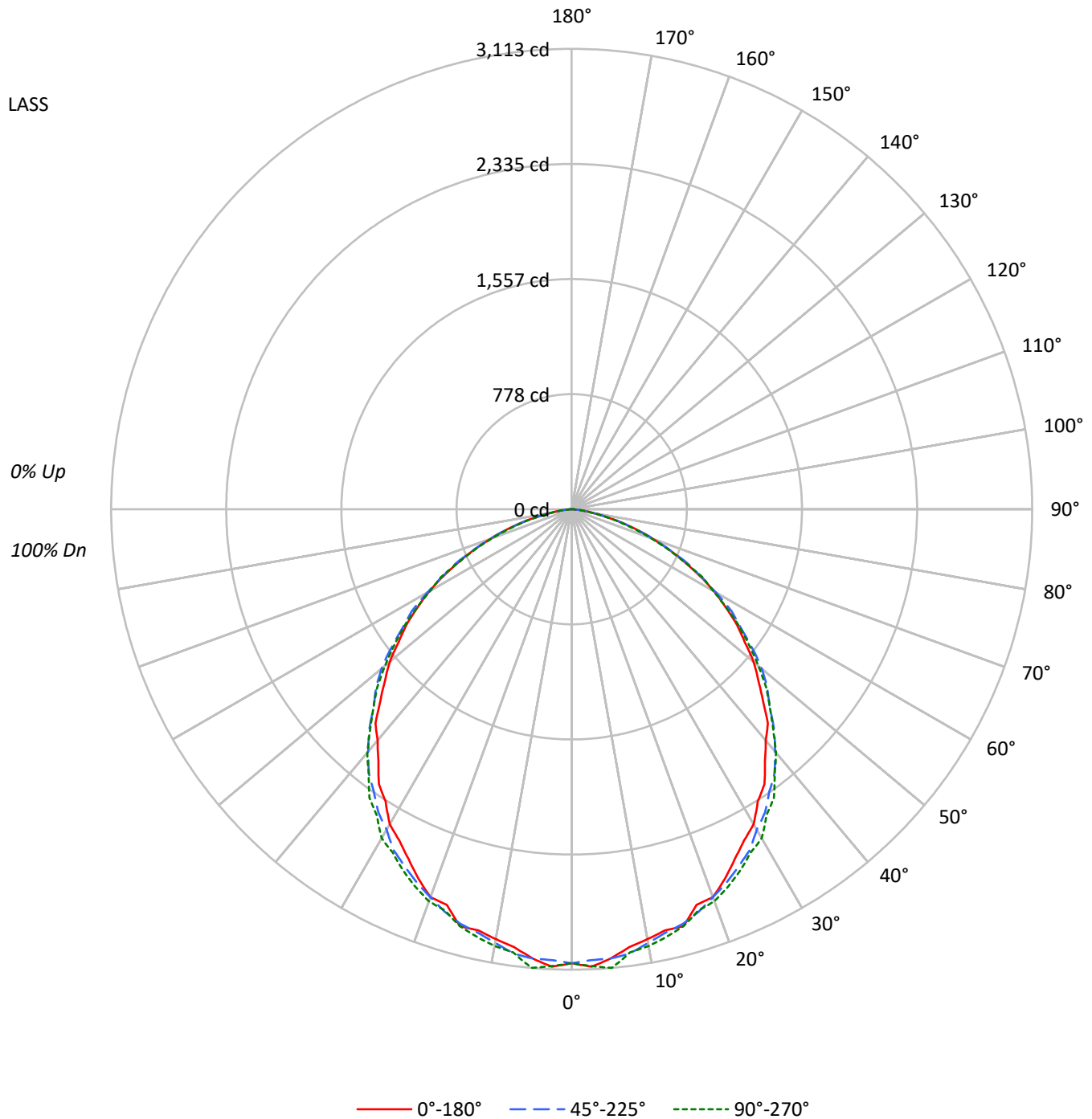
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8260	8260	8260
5°	8233	8236	8409
10°	8065	8136	8193
15°	8130	8085	8131
20°	7992	7992	8077
25°	7746	7916	8003
30°	7640	7774	7981
35°	7460	7655	7827
40°	7170	7515	7548
45°	6953	7200	7211
50°	6725	7028	6894
55°	6407	6532	6485
60°	5991	6051	5942
65°	5342	5479	5305
70°	4584	4600	4471
75°	3631	3622	3482
80°	2431	2365	2272
85°	1321	1309	1223

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 7386 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.7	3.7
10°-20°	818.3	10.6
20°-30°	1226.0	15.8
30°-40°	1453.0	18.8
40°-50°	1455.7	18.8
50°-60°	1235.6	16.0
60°-70°	833.1	10.8
70°-80°	366.1	4.7
80°-90°	59.5	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2333.0	30.2
0°-40°	3786.0	48.9
0°-60°	6477.4	83.7
0°-90°	7736.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7736.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3069	3069	3069	3069	3069	
5°	3048	3040	3049	3040	3113	287
15°	2918	2884	2902	2917	2918	813
25°	2609	2623	2666	2701	2695	1206
35°	2271	2278	2330	2384	2383	1410
45°	1827	1861	1892	1941	1895	1413
55°	1366	1357	1392	1383	1382	1215
65°	839	828	860	828	833	834
75°	349	342	348	324	335	374
85°	43	42	42	41	40	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3069.4	3069.4	3069.4	3069.4	3069.4
2.5°	3096.0	3072.6	3050.8	3076.2	3091.6
5°	3047.7	3040.5	3048.8	3039.7	3113.0
7.5°	2985.0	3012.4	3028.2	3018.3	3022.7
10°	2951.7	2942.2	2977.5	3002.1	2998.5
12.5°	2916.1	2930.3	2932.3	2958.9	2961.3
15°	2918.1	2884.4	2902.2	2917.3	2918.5
17.5°	2804.7	2841.2	2853.5	2887.9	2845.1
20°	2790.8	2764.3	2790.8	2826.1	2820.6
22.5°	2705.6	2675.9	2733.0	2764.3	2762.3
25°	2608.9	2623.2	2666.0	2700.9	2695.3
27.5°	2524.1	2540.8	2601.8	2649.8	2618.8
30°	2458.7	2450.4	2501.9	2544.7	2568.5
32.5°	2341.8	2371.9	2432.2	2474.6	2452.0
35°	2270.9	2277.6	2330.3	2384.2	2382.6
37.5°	2146.8	2178.1	2252.3	2267.3	2253.4
40°	2041.0	2072.3	2139.3	2155.6	2148.8
42.5°	1962.9	1968.5	2026.0	2044.6	2014.9
45°	1827.0	1861.1	1892.0	1940.7	1894.8
47.5°	1711.3	1727.1	1793.7	1806.8	1782.6
50°	1606.3	1611.8	1678.8	1662.5	1646.7
52.5°	1474.3	1497.7	1535.3	1532.1	1513.5
55°	1365.7	1356.6	1392.2	1382.7	1382.3
57.5°	1235.3	1251.2	1280.5	1265.4	1241.3
60°	1113.2	1113.6	1124.3	1107.3	1104.1
62.5°	977.3	982.1	984.4	963.4	997.5
65°	839.0	827.9	860.4	827.5	833.1
67.5°	711.8	717.3	714.2	693.5	701.5
70°	582.6	589.7	584.6	561.2	568.3
72.5°	464.5	455.8	461.3	432.0	445.5
75°	349.2	342.0	348.4	323.8	334.9
77.5°	237.8	243.3	239.4	226.3	233.8
80°	156.9	152.6	152.6	145.1	146.6
82.5°	91.5	87.2	86.0	83.6	87.2
85°	42.8	41.6	42.4	41.2	39.6
87.5°	15.5	15.9	15.9	15.1	14.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)